
Converting Digital Images to Microfilm



Utah State Archives

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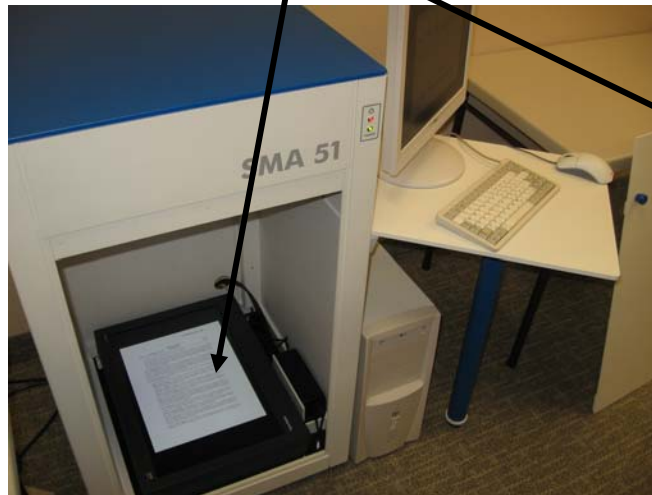
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How does image conversion work?

1. Images are saved on the state secure file transfer protocol (SFTP) server, then downloaded onto a computer at the Archives.
2. Images are projected one at a time onto a screen while a camera automatically photographs each projected image.
3. Exposures are processed into microfilm.



Records management

- The chief administrative officer of each governmental entity is mandated to establish and maintain a continuing records management program.

Utah Code 63A-12-103

- Government records are state property and must be retained according to approved retention schedules.

Utah Code 63A-12-105

- **Retention (Schedule)** is the length of time a record must be maintained in agency custody.

Utah Code 63G-2-103(26)

Records management

- A **record series** is a group of records that may be treated as a unit for records management purposes.
Utah Code 63G-2-103(23)
 - A **series number** is a unique identifying number assigned to a specific record series. It is created when a record series is specifically scheduled with the Archives.
 - A series number is necessary for identifying and tracking records through the digital-to-microfilm conversion process.
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Records management

- Digital images to be converted to microfilm must belong to a specifically scheduled record series and must be permanent and/or vital records.
 - Unique agency schedules describe specific record series of specific agencies.
 - Click these links to locate [series](#) numbers and [retention information](#) for records that have already been scheduled.
 - Type in agency name and submit search to discover series numbers.
 - If not found, contact your [records analyst](#).
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Digital Conversion: Setting Up

- The **agency** will contact the Archives' records analyst to get authorization and recommendations for format conversion of a specific record series.
 - The **Archives** will assist in scheduling records, if necessary.
 - The **agency** will establish access to the state server by downloading WinSCP software.
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Digital Conversion: Setting Up

The **Archives** will set up and provide login and password and send the agency a Scanner Test Target PM-189.

The **agency** will use login and password to access the default directory on the state SFTP server where images will be saved.

The **Archives** will assign a unique scanner number to each agency.

Digital Conversion: Setting Up

The **agency** will complete the on-line work order request for the record series.

The **Archives** will create a subfolder for the series and return a work order which will become one of the identifying microfilm targets.

Digital Conversion: Scanning

The **agency** will scan records to specifications:

TIFF or PDF images on an optical scanner

300 ppi or higher

scanned at 100 percent

grayscale or black and white

The **agency** will refer to Mountain West Digital Library's Digital Imaging Best Practices Guidelines for scanning standards.

Digital Conversion: Scanning

The **agency** will scan in the same orientation all documents in a file as follows:

- Portrait for legal size documents and smaller to go on either 16 mm or 35 mm microfilm.
- Landscape for larger than legal size documents to go on 35 mm microfilm.

The **agency** will complete a quality control check of all scanned images to ensure accuracy and legibility. The agency is responsible for the integrity of the records.

The **Archives** will verify accuracy of targets, validate image counts based on agency input, and inspect microfilm quality. The Archives will not do page-by-page inspection to discover missing pages.

Digital Conversion: Creating a File

The **agency** will create one file of images which will be equal to one roll of microfilm.

- File size limit for 16mm = 2,000 images
- File size limit for portrait on 35mm = 1,100 images
- File size limit for landscape on 35mm = 650 images

Multi-page TIFF or PDF files are okay.

Image counts include microfilm targets.

Digital Conversion: Creating a File

A file will include beginning and end targets with documents to be microfilmed in between. Images in the file must be ordered in the same sequence they will appear on the finished microfilm roll.

- Save start targets in multi-page TIFF labeled 00000 through 00009.
 - Save end targets in multi-page TIFF labeled 99991 through 99999.
 - Or use another naming convention that will push microfilm targets to the beginning and end of the file.
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Order of Beginning Targets:

[Download
template
targets](#)

1. **Start**
2. **Continued from preceding roll** (if applicable)
3. **Scanner Test Target PM189** (must be re-scanned for each new transmission)
4. **Scanner number/ roll number/ series number** (plus details such as ppi and format)
5. **Work order** (the Archives will provide this target)
6. **Title page**
7. **Classification page**
8. **Agency certificate** (validates that the documents are the real and true documents they are purported to be)
9. **Operator certificate** (identifies the person who scanned the images and the boundaries of documents in the file)

Order of End Targets:

1. **Operator certificate** (identifies the person who scanned the images and the boundaries of documents in the file)
 2. **Agency certificate** (validates that the documents are the real and true documents they are purported to be)
 3. **Classification** page
 4. **Title** page
 5. **Work order** (the Archives will provide this target)
 6. **Scanner number/ roll number/ series number** (This page also has details about PPI and format, etc.)
 7. **Scanner Test Target PM189** (must be re-scanned for each new transmission)
 8. **Continued on next roll** (if applicable)
 9. **End of roll please rewind**
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Digital Conversion: Submitting File

The **agency** will name the file as follows:

- First four letters of county, municipality, or agency name – **kane**
- Scanner number – **260** (unique agency number)
- Roll number – commencing with **1** and continuing sequentially thereafter.

Example: **kane 260-1**

The **agency** will drag and save the file containing documents and targets to the agency's folder on the SFTP server.

Digital Conversion: Submitting File

The **agency** will notify the Archives by submitting the Digital to Microfilm Notification form online.

If you have questions about this form, call the Digital Imaging Center, (801) 531-3835.

Digital Conversion: Creating Microfilm

The **Archives** will receive the file and convert it into one roll of microfilm.

The **Archives** will store a master copy permanently.

The **Archives** will provide copies of microfilm upon request: ([Microfilm pricing](#)).

Digital Conversion: Checking Microfilm Inventory at the Archives

Go to [unique agency specific schedules](#) on the Archives web site.

- Type your agency's name in the search prompt
- Find “microfilm list” and click on PDF

Questions?

- Contact records analyst:

Rosemary Cundiff	(801) 531-3866	rcundiff@utah.gov
Maren Jeppsen	(801) 531-3860	mjeppsen@utah.gov
Susan Mumford	(801) 531-3861	smumford@utah.gov
Glen Fairclough	(801) 531-3841	gfairclough@utah.gov

- Contact Archives Micrographics:

Brian Carpenter	(801) 531-3830	bcarpenter@utah.gov
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